How to Set Up R Kernel in Jupyter Lab

NAS currently supports three versions of the R machine learning platform:

- R Versions 3.6 and 4.2 are provided in the r3_6 and r4_2 NAS conda environments, respectively.
- R Version 4.1 is provided as a NAS software package.

The versions in conda come preinstalled with many of the popular R packages used in data science and machine learning, including Jupyter Lab. Although the version provided as a NAS software package does not include Jupyter Lab, you can configure Jupyter Lab to work with this version of R by following the instructions below.

Before You Begin: Complete all the steps in the following articles:

- Secure Setup for Using Jupyter Notebook for Machine Learning Development on NAS Systems
- Using Jupyter Notebook for Machine Learning Development on NAS Systems

Complete the following steps to install R and set up Jupyter Lab to use it:

1. Load the following NetBSD Packages Collection (pkgsrc) module and start R:

   ```
   pfe27% module load pkgsrc/2022Q1-rome
   pfe27% R
   ```

2. Install IRkernel in R:

   ```
   > install.packages("IRkernel")
   ```

3. Run IRkernel in R:

   ```
   > IRkernel::installspec()
   ```

4. Copy the IRkernel directory to your Jupyter data directory. For example, if your IRkernel directory is in$HOME/R/x86_64-redhat-linux-gnu-library/4.1, do:

   ```
   > cp -R $HOME/R/x86_64-redhat-linux-gnu-library/4.1/IRkernel $HOME/.local/share/jupyter
   ```

5. Change the R path (the first "R") in the $HOME/.local/share/jupyter/IRkernel/kernelspec /kernel.json file to: /nasa/pkgsrc/toss4/2022Q1-rome/bin/R *(or other R)*
6. Load Jupyter and run R.

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Machine Learning -> Machine Learning at NAS -> How to Set Up R Kernel in Jupyter Lab
https://www.nas.nasa.gov/hecc/support/kb/entry/685/